

## **RESPONSE**

### Support

Applicants have amended claim 1 to specify that the claimed process includes a step (I) of mixing a fuel and a lubricant in a specific range of ratios and that the engine in step (II) is a two-stroke internal combustion engine containing a power valve. Support for these amendments is found in original claims 1 and 15, and at page 3, lines 4-19 of the specification, and at page 3, lines 20-24 of the specification.

Applicants have also amended claim 1 to specify that component (B)(2) is an aminophenol, a Mannich reaction product, or a mixture thereof. Support for this amendment comes from original claim 1 and page 3, lines 4-19 of the specification.

Applicants have also amended claims 1 and 16 to specify that the amount of component (B)(1) present in the composition is at least 1.6 weight percent, and the combined amount of components (B)(1) and (B)(2) present in the composition is from 6.5 to 15 weight percent, based on the total amount of the composition. Support for this amendment comes from page 13, lines 17-22 of the specification.

Applicants have cancelled claims 4, 11 and 15.

No other elements of the claims have been amended.

### Response

The Examiner rejected claims 1-14 and 16-20 under 35 U.S.C. 102(b) as being anticipated by International Publication No. WO 93/03120 and rejected claim 15 under 35 U.S.C. 103(a) as being unpatentable over the same reference. Applicants respectfully disagree.

The Examiner concedes that WO 93/03120 has no teaching toward the use of the relevant compositions in engines containing a power valve. The Examiner states that the claimed invention calls for a process wherein the steps are met by the applied prior art and the limitation of the apparatus in the preamble does not change the process steps of the claim. The Examiner concludes that the power valve limitation does not limit the claim. Applicants respectfully disagree.

Applicants have amended the claim in order to specify that the process steps require that the described lubricant composition be supplied to a two-stroke internal combustion engine containing a power valve. The presence of a power valve in the engine is a required feature of the engine used in the practice of the invention and the steps of the present claims require this feature. WO 93/03120 has no teaching on or toward two-stroke engines containing a power valve, therefore, in view of this and the

remarks that follow, the method claims of the present invention are both novel and inventive over the reference.

Applicants have also amended claim 1 to specify that the lubricant composition is mixed with a fuel in a specific range of ratios and then supplied to a two-stroke internal combustion engine containing a power valve. This feature is also found in claim 15, which was found to be novel over WO 93/03120. Applicants respectfully submit that the present method claims are therefore novel over WO 93/03120 as the references does not disclose nor teach toward the specified lubricant to fuel ratio.

In addition, Applicants have limited all claims to specify that (B)(2) is an aminophenol, a Mannich reaction product, or a mixture thereof, and that the amount of (B)(1) present in the composition is at least 1.6 % weight and the combined amount of (B)(1) and (B)(2) present in the composition is from 6.5 to 15 % weight. The data in the specification, in the table on page 20, shows that the present invention provides a surprising improvement in the power valve rating test results. This data is summarized below, sorted by power valve rating results from lowest to highest, where a higher power valve rating indicates better performance of the composition:

Example No  Claims require	%(B)(1)  (≥ 1.6 %wt)	%(B)(2)	%(B)(1) + %(B)(2)  (6.5 to 15 %wt)	Power Valve Rating
<b>1</b>  (comparative)	<b>0</b>	<b>0</b>  (7.2 % PIBSA Dispersant)	<b>0</b>	<b>2.1</b>
<b>5</b>  (comparative)	<b>1.15</b>	<b>5.9</b> (Aminophenol)  (+ 1.3 % PIBSA Dispersant)	<b>8.35</b>	<b>2.8</b>
<b>3</b>  (comparative)	<b>1.2</b>	<b>6.6</b> (Aminophenol)	<b>7.8</b>	<b>3.1</b>
<b>7</b>  (comparative)	<b>6</b>	<b>0</b>  (5.6% PIBSA Dispersant)	<b>6</b>	<b>3.4</b>
<b>4</b>  (within claims)	<b>3</b>	<b>6.6</b> (Aminophenol)	<b>9.6</b>	<b>3.8</b>
<b>8</b>  (within claims)	<b>6</b>	<b>4.8</b> (Aminophenol)	<b>10.8</b>	<b>4.3</b>
<b>6</b>  (within claims)	<b>2</b>	<b>7.4</b> (Mannich)	<b>9.4</b>	<b>4.6</b>

Please note that the PIBSA dispersants are not included in the calculation of the (B)(2) weight percents in the table above as the claims no longer list this type of

material for (B)(2). As the data shows, Examples 4, 6 and 8 all fall under the current claims and provide improved performance over Examples 1, 3, 5 and 7, which are not under the current claims. Example 1 does not have any (B)(1) or (B)(2) present, while Example 3 and 5 do not have at least 1.6 % weight (B)(1) present, and Example 7 does not contain any (B)(2) as defined by the current claims. Data for Example 2 is not shown in the table above as Example 2 contains a synthetic lubricant of unknown composition per footnote d on page 21 the specification.

These results show that compositions comprising the components of the present invention, within the ranges specified in the current claims, provide improved performance as measured by the power valve ratings. WO 93/03120 provides no teaching on or toward the claimed compositions or their improved performance. Therefore, the present invention is both novel and non-obvious over the reference.

Conclusion.

For the foregoing reasons it is submitted that the present claims are novel and unobvious over the cited reference, and in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

Any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

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